

REMARKS

Favorable reconsideration of this application is respectfully requested in view of the following remarks.

The Abstract of the Disclosure has been amended to correct an inadvertent typographical error. With respect to the Examiner's observation at the top of page two of the Official Action concerning the phrase "a projected part" in line 6 of the original Abstract of Disclosure, it is noted that the original Abstract of the Disclosure was left-hand justified as well as right-hand justified and so the phrase "a projected part" appears as though it is a single word when in fact spaces are provided between each of the three words. The amended Abstract of the Disclosure submitted with this Amendment does not include right-hand justification and so the phrase noted in the Official Action properly appears as three separate words. A clean version of the new Abstract of the Disclosure is attached on a separate sheet to this Amendment. Withdrawal of the objection to the Abstract of the Disclosure is respectfully requested.

Claims 1-3 have been amended to address the issues raised on pages two and three of the Official Action. The amendments addressing these issues do not narrow the claim scope as they merely recite in different terms wording set forth in the original claims. Withdrawal of the claim rejection based on the second paragraph of 35 U.S.C. § 112 is respectfully requested.

The subject matter of this application pertains to a bumper apparatus used in connection with a vehicle. As set forth in original Claim 1 and as defined in the current version of Claim 1 presented in this Amendment, the bumper apparatus comprises a bumper reinforcement extended in the width direction of the vehicle and

a bumper stay fixed to a side member on the side of the body of the vehicle. The bumper stay comprises a front wall portion fixed to the bumper reinforcement, a rear wall portion fixed to the side member and a plurality of ribs coupling the rear and front wall portions. The ribs comprise an inner side rib and an outer side rib. The inner and outer side ribs are provided with an angle of inclination diverging toward the bumper reinforcement, and the inner side rib includes a projected portion projecting to the inner side. In addition, the dimension of the front wall portion in the width direction is larger than the dimension of the rear wall portion in the width direction.

The Official Action sets forth a rejection of original independent Claim 1 and various dependent claims on the basis of the disclosure contained in Japanese Application Publication No. 2002-12104 in view of the disclosure contained in Japanese Application No. 11-208393.

The '*104 Japanese Application Publication* discloses various embodiments of a bumper-stay. The Official Action refers to the bumper-stay illustrated in Fig. 2(A) which includes oppositely positioned wall portions 21, 24 and a plurality of ribs 22, 23, 28 extending between the two wall portions 21, 24.

The '*393 Japanese Application Publication* discloses a vehicle bumper fitting structure that includes a bumper-stay 3 positioned between a bumper-reinforce 5 and a side-member 7. The bumper-stay 3 possesses a flange portion 3f, a curved cross-sectional portion 3e, and a triangular-shaped wall portion 3a. The triangular-shaped wall portion 3a is provided with a bead 3g.

Fig. 2(b) of the '*393 Japanese Application Publication* illustrates the bumper fitting structure just after the start of a collision and illustrates how the triangular-

shaped portion 3a of the bumper-stay 3 is crushed back upon itself at the bead portion 3g. As discussed in the English language translation of the '*393 Japanese Application Publication*, with the triangular-shaped portion 3a of the bumper-stay 3 crushing back upon itself by virtue of the bead 3g, the bumper-reinforce 5 is arranged nearly at a right angle to the longitudinal direction of the side-member 7. As illustrated in Figs. 3(a) and 3(b), after the triangular-shaped portion 3a of the bumper-stay 3 has crushed-back upon itself, the side-member 7 is pressure-crushed at the bead portions 7c.

The Official Action observes that it would have been obvious to provide the rib 22 disclosed in the '*104 Japanese Application Publication* with the bead portion 3g disclosed in the '*393 Japanese Application Publication*. However, there are a number of differences between the bumper apparatus at issue here and the disclosures contained in the applied documents.

In one respect, the bumper stay at issue here includes, in addition to the inner and outer side ribs, a plurality of middle ribs positioned between the inner and outer side ribs as now set forth in Claim 7. Thus, Claim 1 recites that the bumper stay comprises the middle ribs and the projected portion provided at the inner side rib. The '*393 Japanese Application Publication* discloses providing a bead portion 3g to allow the triangular-shaped wall portion 3a of the bumper stay 3 to crush back upon itself as illustrated in Fig. 2(b) during the initial stage of a collision so that the bumper-reinforce 5 is perpendicularly oriented relative to the longitudinal direction of the side-member 7. Considering this purpose of the bead portion 3g, it would not have been obvious to utilize the bead portion 3b together with middle ribs positioned between the outer and inner side ribs as claimed because the middle ribs would

inhibit the triangular-shaped wall portion 3a from crushing back upon itself to achieve the configuration shown in Fig. 2(A) of the '393 *Japanese Application Publication*.

In addition, as described beginning in line 19 of page 6 of the present application, the projected portion provided at the inner side rib is located at a portion coupling the inner side rib and the front wall portion. Further, in the bumper apparatus at issue here, the middle ribs are positioned relative to the side walls of the side member such that each of the middle ribs is positioned along a line extending from one of the side walls of the side member. This arrangement is illustrated in Fig. 1 which depicts each of the middle ribs 9, 10 positioned along a line extending from one of the side walls of the side member 3. Independent Claim 1 has been amended to recite the claimed positioning of the middle ribs relative to the side walls of the side member, and to set forth the location of the projected portion at a portion coupling the inner side rib and the front wall portion. Neither of the applied documents discloses such a positioning of middle ribs relative to side walls of a side member, together with the claimed positioning of the projected portion.

In light of the foregoing, it is respectfully submitted that a combination of the disclosures contained in the '104 *Japanese Application* and the '393 *Japanese Application Publication* would not have directed one to do that which is recited in independent Claim 1 as the invention.

New independent Claim 7 is also presented for consideration. Independent Claim 7 defines that the bumper apparatus comprises a bumper reinforcement extending in the width direction of the vehicle and a bumper stay fixed to a side member on the vehicle body. The bumper stay comprises a front wall portion fixed to the bumper reinforcement, a rear wall portion fixed to the side member and a

plurality of ribs coupling the rear wall portion and the front wall portion. Claim 7 goes on to recite that the plurality of ribs comprises an inner side rib, an outer side rib and two middle ribs positioned between the inner and outer side ribs in the width direction of the vehicle, with the inner and outer side ribs diverging away from one another in a direction toward the bumper reinforcement. Claim 7 also recites that the inner side rib and one of the middle ribs located closest to the inner side rib form a hollow interior region within the bumper stay and further recites that the inner side rib includes a projected portion projecting in a direction away from the hollow interior region. Further, Claim 7 recites that the front wall portion of the bumper stay possesses a width dimension larger than the width dimension of the rear wall portion.

The bumper apparatus recited in Claim 7 is patentably distinguishable over a combination of the disclosures in the two applied documents. In one respect, as discussed above, the *'393 Japanese Application Publication* discloses that the purpose of the bead portion 3g is to allow the triangular-shaped wall portion 3a of the bumper stay 3 to crush back upon itself as illustrated in Fig. 2(b) during the initial stage of a collision so that the bumper-reinforce 5 is perpendicularly oriented relative to the longitudinal direction of the side-member 7. Considering this purpose, it would not have been obvious to utilize the bead portion 3b disclosed in the *'393 Japanese Application Publication* in combination with middle ribs positioned between outer and inner side ribs as recited in Claim 7 because such middle ribs would tend to resist the triangular-shaped wall portion 3a from crushing back upon itself in the manner intended by the *'393 Japanese Application Publication*.

Further, in the '393 *Japanese Application Publication*, the bead portion 3g projects toward the hollow interior region of the triangular-shaped wall portion 3a of the bumper stay and thus does not project in a direction away from such hollow interior region as recited in independent Claim 7. For at least these reasons, it is respectfully submitted that a combination of the disclosures contained in the '104 *Japanese Application Publication* and the '393 *Japanese Application Publication* would not have led one to construct a bumper apparatus having the features recited in independent Claim 7 and the various dependent claims.

Early and favorable action with respect to this application is respectfully requested.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

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Date: July 5, 2005

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